CLAIMS

1. A force sensor, for use in combination with an automated electronic defibrillator (AED), comprising:

a first conductive layer;

a second conductive layer being spaced apart from the first conductive layer, the first and second conductive layers being electrically isolated from one another; and

electrical communication means for establishing an electrical communication path between the first and second conductive layers responsive to the application of a force to said electrical communication means.

2. The force sensor of claim 1 wherein at least a part of the electrical communication means are formed of an extrudable, electrically conductive material, the electrical communication means being extruded by the application of a force to said electrical communication means, at least one extrusion thereof establishing a path of electrical communication between the first and second conductive layers responsive to the application of said force.

3. The force sensor of claim 2 further including a flexible, nonconductive layer being disposed between the first and second conductive layers.

4. The force sensor of claim 3 wherein the first and second conductive layers are formed of conductive ink printed on opposed sides of the nonconductive layer.

5. The force sensor of claim 4 further including a plurality of holes defined through the nonconductive layer and through the first and second conductive layers printed thereon.

6. The force sensor of claim 5 further including a first extrudable, conductive layer disposed on the first conductive layer and a second extrudable, conductive layer disposed on the second conductive layer, the first and second extrudable, conductive layers being extrudable into the plurality of holes defined through the nonconductive layer and through the first and second conductive layers responsive to a force applied thereto to form an electrically communicative connection between the first and second conductive layers.

7. The force sensor of claim 3 wherein the first and second conductive layers are formed of conductive, metallic foil.

8. The force sensor of claim 1 being disposed in a hole defined in an electrode.

9. The force sensor of claim 1 wherein the magnitude of the force applied to the force sensor is inversely proportional to the impedance existing between the first and second conductive layers.

10. The force sensor of claim 1 wherein the impedance existing between the first and second conductive layers is related to the magnitude of the force applied to the force sensor.

11. An automated electronic defibrillator (AED) for use by an operator in assisting in resuscitating a victim, comprising:

a force sensor applicable to a skin surface of the victim and being responsive to the application of a force to said force sensor,

an AED control system being in electrical communication with the force sensor, the AED control system processing a signal communicated from the force sensor related to the magnitude of force applied thereto and to the frequency of application of the force thereto; and

AED prompting means operably coupled to the AED control system for receiving communication signals from the AED control system and for communicating prompts to the operator for use by the operator in resuscitating the victim, the prompts being related to the signal communicated to the AED control system by the force sensor

related to the magnitude of force applied to the force sensor and to the frequency of application of the force to the force sensor .

~~12.~~ 2 The AED of claim ~~11~~ 1 wherein the force sensor is responsive to the relative magnitude of the force applied thereto and communicates a signal related to said force magnitude to the AED control system.

~~13.~~ 3 The AED of claim ~~12~~ 2 wherein the AED control system communicates signals relating to the relative magnitude of force applied to the force sensor to the AED prompting means for transmission as a prompt to the rescuer.

~~14.~~ 4 The AED of claim ~~11~~ 1 wherein the AED control system determines the interval between a succession of force applications applied to the force sensor.

~~15.~~ 5 The AED of claim ~~14~~ 4 wherein the AED control system communicates signals relating to the interval between a succession of force applications applied to the force sensor to the AED prompting means for transmission as a prompt to the rescuer.

~~16.~~ 6 The AED of claim ~~11~~ 1 wherein the force sensor comprises:

a first conductive layer;

a second conductive layer being spaced apart from the first conductive layer, the first and second conductive layers being electrically isolated from one another; and

electrical communication means for establishing electrical communication between the first and second conductive layers responsive to the application of a force to said electrical communication means.

~~17.~~ 7 The AED of claim ~~16~~ 6 wherein at least a part of the electrical communication means of the force sensor are formed of an extrudable, electrically conductive material, the electrical communication means being extruded by the application of a force to said electrical communication means, at least one extrusion thereof establishing a path of electrical communication between the first and second conductive layers responsive to the application of said force.

~~18.~~ 8 The AED of claim ~~17~~ 7, the force sensor further including a flexible, nonconductive layer being disposed between the first and second conductive layers.

~~19.~~ 9 The AED of claim ~~18~~ 8 wherein the first and second conductive layers of the force sensor are formed of conductive ink printed on opposed sides of the nonconductive layer.

~~20.~~ 10 The AED of claim ~~19~~ 9, the force sensor further including a plurality of holes defined through the nonconductive layer and through the first and second conductive layers printed thereon.

~~21.~~ 11 The AED of claim ~~20~~ 10, the force sensor further including a first extrudable, conductive layer disposed on the first conductive layer and a second extrudable, conductive layer disposed on the second conductive layer, the first and second extrudable, conductive layers being extrudable into the plurality of holes defined through the nonconductive layer and through the first and second conductive layers responsive to a force applied thereto to form an electrically communicative connection between the first and second conductive layers.

~~22.~~ 12 The AED of claim ~~16~~ 6 wherein the first and second conductive layers of the force sensor are formed of conductive, metallic foil.

~~23.~~ 13 The AED of claim ~~11~~ 1 wherein the force sensor is disposed in a hole defined in an electrode.

~~24.~~ 14 The AED of claim ~~16~~ 6 wherein the magnitude of the force applied to the force sensor is inversely proportional to the impedance existing between the first and second conductive layers.

25. 15 The AED of claim 16 wherein the impedance existing between the first and second conductive layers of the force sensor is related to the magnitude of the force applied to the force sensor.

26. A method of prompting a rescuer in the application of cardiopulmonary resuscitation to a victim comprising the steps of:

sensing a force applied by the rescuer to the victim's sternum;

sensing an interval between successive applications of force to the victim's sternum;

comparing the force applied by the rescuer to the victim's sternum to a standard of force known to effect resuscitation;

providing a prompt to the rescuer that prompts the rescuer to vary the force delivered to approximate the force that is known to effect resuscitation;

comparing the interval between successive applications of force to the victim's sternum to a standard interval known to effect resuscitation; and

providing a prompt to the rescuer that prompts the rescuer to vary the interval of force application to approximate the interval that is known to effect resuscitation.

27. An automated electronic defibrillator (AED) for use by an operator in assisting in resuscitating a victim, having a charging circuit for developing a high voltage charge, at least two electrodes for application to the person of a victim, the at least two electrodes being in electrical communication with the charging circuit a control circuit communicatively coupled to the charging circuit and the electrodes for detecting certain biological parameters of the victim and for controlling the delivery of a voltage charge from the charging circuit through the at least two electrodes to the victim, comprising:

means for prompting a rescuer in the delivery of cardiopulmonary resuscitation (CPR) to the victim.

28. 18 The AED of claim ~~27~~ 17 wherein the means for prompting a rescuer includes a force sensor applicable to a skin surface of the victim and being responsive to the application of a force to said force sensor.

29. The AED of claim 27 wherein the means for prompting a rescuer further includes the control system being in electrical communication with the force sensor, the AED control circuit processing a signal communicated from the force sensor related to the magnitude of force applied thereto and to a frequency of application of the force thereto.

30. The AED of claim 27 wherein the means for prompting a rescuer further includes prompting means operably coupled to the AED control circuit for receiving communication signals from the AED control circuit and for communicating prompts to the rescuer for use by the rescuer in resuscitating the victim, the prompts being related to the signal communicated to the AED control circuit by the force sensor related to the magnitude of force applied to the force sensor and to the frequency of application of the force to the force sensor .

~~31.~~ 20 The AED of claim ~~30~~ 19 wherein the force sensor is responsive to the relative magnitude of the force applied thereto and communicates a signal related to said force magnitude to the AED control system.

~~32.~~ 21 The AED of claim ~~31~~ 20 wherein the AED control circuit communicates signals relating to the relative magnitude of force applied to the force sensor to the AED prompting means for transmission as a prompt to the rescuer.

~~33.~~ 22 The AED of claim ~~32~~ 21 wherein the AED control system determines the interval between a succession of force applications applied to the force sensor.

~~34.~~ 23 The AED of claim ~~33~~ 22 wherein the AED control circuit communicates signals relating to the interval between a succession of force applications applied to

the force sensor to the AED prompting means for transmission as a prompt to the rescuer.

35. The AED of claim 28 wherein the force sensor comprises:

a first conductive layer;

a second conductive layer being spaced apart from the first conductive layer, the first and second conductive layers being electrically isolated from one another; and

electrical communication means for establishing electrical communication between the first and second conductive layers responsive to the application of a force to said electrical communication means.

36. The AED of claim 35 wherein at least a part of the electrical communication means of the force sensor are formed of an extrudable, electrically conductive material, the electrical communication means being extruded by the application of a force to said electrical communication means, at least one extrusion thereof establishing a path of electrical communication between the first and second conductive layers responsive to the application of said force.

37. The AED of claim 36, the force sensor further including a flexible, nonconductive layer being disposed between the first and second conductive layers.

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~~38.~~ 27 The AED of claim ~~37~~ 26 wherein the first and second conductive layers of the force sensor are formed of conductive ink printed on opposed sides of the nonconductive layer.